

C. REMARKS

This Amendment is filed concurrently with an RCE and is in response to the Office Action dated November 24, 2004, in which claims 1-56 were rejected. With this Amendment, claims 1, 2, 8, 10, 11, 13, 18, 19, 28, 30, 33, 36, 37, 41 and 42 are amended, claims 3, 4, 6, 7, 9, 14-17, 20-27, 31, 35, 38-40 and 43-56 are canceled without prejudice, and claims 57-68 are added. With this Amendment, claims 1, 2, 5, 8, 10-13, 18, 19, 28-30, 32-34, 36, 37, 41, 42 and 57-68 are presented by the Applicant for reconsideration and allowance.

I. REJECTION OF CLAIMS 1-5, 10, 13, 15, 18-25, 27, 28, 31, 35, 37 AND 39-45 UNDER 35 U.S.C. § 102(b) AS BEING ANTICIPATED BY SULLIVAN '561.

Section 2 of the Office Action rejected claims 1-5, 10, 13, 15, 18-25, 27, 28, 31, 35, 37 and 39-45 under 35 U.S.C. § 102(b) as being anticipated by Sullivan '561 (U.S. Pat. No. 5,779,561). Claims 1 and 28 are independent claims. Claims 2, 10, 13, 18 and 19 depend from claim 1, and claims 37, 41 and 42 depend from claim 28. With this Reply, claims 1, 2, 10, 13, 18, 19, 28, 37, 41 and 42 are amended to more clearly set forth the invention, and are now believed to be patentably distinguishable over the cited prior art. Claims 3, 4, 15, 20-25, 27, 31, 35, 39, 40 and 43-45 are canceled without prejudice.

Independent claim 1, as amended, recites a golf ball including a solid center, at least one intermediate layer, and a cover layer. The solid center has a deflection, under an applied static load of 200 lb., of between about 0.090 inches and about 0.150 inches. The intermediate layer includes thermoplastic material. The material includes a co- or ter- polymer of ethylene and acrylic acid, wherein 100% of the acid groups are neutralized with metal ions. The co- or ter-polymer including a level of Magnesium Oleate. The cover layer includes an ionomer or ionomer blend and has a Shore D hardness, measured on the curved surface of the golf ball, of greater than about 70. The golf ball, when struck by a driver club at a clubhead velocity of about 160 feet-per-second, has an initial velocity off the clubhead of greater than 240 feet-per-second.

Independent claim 28, as amended, recites a golf ball including a core, a mantle, and a cover layer. The core includes a high cis-content polybutadiene rubber. The rubber is synthesized using a neodymium catalyst. The mantle includes a co- or ter- polymer of ethylene and acrylic acid, wherein 100% of the acid groups are neutralized with metal ions. The cover layer includes an ionomer and has a Shore D hardness, measured on the curved surface of the golf ball, of greater than about 70. The golf ball exhibits a coefficient of restitution of greater than about 0.785 at a test velocity of 175 feet-per-second.

Sullivan '561 does not disclose, teach or suggest the golf ball of either claim 1, as amended or claim 28, as amended. In particular, Sullivan '561 does not disclose, teach or suggest a golf ball including a solid center and at least one intermediate layer wherein the intermediate layer includes a co- or ter- polymer of ethylene and acrylic acid, wherein 100% of the acid groups are neutralized with metal ions, the co- or ter- polymer including a level of Magnesium Oleate, as required by claim 1. Sullivan '561 also does not disclose, teach or suggest a golf ball including a cover layer comprising an ionomer or ionomer blend having a Shore D hardness, measured on the curved surface of the golf ball, of greater than about 70, and a golf ball, which, when struck by a driver club at a clubhead velocity of about 160 feet-per-second, has an initial velocity off the clubhead of greater than 240 feet-per-second, as required by claim 1.

Sullivan '561 also does not disclose, teach or suggest a golf ball including a core including polybutadiene rubber synthesized using a neodymium catalyst, and a mantle including a co- or ter- polymer of ethylene and acrylic acid, wherein about 100% of the acid groups are neutralized with metal ions, and a golf ball exhibiting a coefficient of restitution of greater than about 0.785 at a test velocity of 175 feet-per-second, as required by claim 28.

In contrast, Sullivan '561 discloses a multi-layer golf ball having a central core, an inner cover layer containing a non-ionomeric polyolefin material and a filler, and a resin composition outer cover layer. The golf ball has a coefficient of restitution of at least about 0.750. In particular, it is the object of Sullivan '561 to provide a multi-layer golf ball with a

non-ionomeric mantle layer. Col. 2, lines 33-35. Further, the non-ionomeric inner cover layer is configured such that it does not contribute to the COR of the ball.

Sullivan '561 teaches away from the golf balls of claims 1 and 28 by specifying a non-ionomeric mantle layer that does not contribute to the COR of the ball. The golf balls of claims 1 and 28 include an intermediate layer having modified ionomeric material that is configured to improve and increase the COR of the ball. This is reflected in the COR values of the golf balls of Sullivan '561 being well below the COR of the golf ball of claim 28.

In addition to teaching away from claims 1 and 28, as amended, Sullivan '561 also does not disclose, teach or suggest: the use of magnesium oleate in the intermediate layer of a golf ball as required by claim 1, as amended, and the use of a neodymium catalyst to synthesize the polybutadiene rubber within the core of the golf ball, as required by claim 28. Further, Sullivan '561 does not teach, suggest or disclose golf balls having the COR value or the initial velocity values required by claims 1 and 28, as amended.

Further, in the rejection of independent claims 1 and 28, the Office Action states that the COR and initial velocity values specified in these claims would be inherently met by Sullivan '561. Applicant's respectfully disagree with these statements for at least two reasons. First, nothing in Sullivan '561, alone or in combination with the cited art, discloses, teaches or suggests the requirements of claims 1 and 28, as amended. Moreover, the golf ball constructions disclosed and taught by Sullivan '561 do not inherent result in constructions that result in the COR and initial velocity requirements of claims 1 and 28. Inherency requires the missing content to be necessary. *Southern Clay Products, Inc. v. United Catalysts, Inc.*, 43 Fed.Appx. 379, 388 (Fed. Cir. 2002). Inherency may not be established by probabilities or possibilities. *Id.* “The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *Southern Clay Products, Inc.*, 43 Fed.Appx. at 388 (*citing In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999)). It is not necessary for the golf ball constructions discloses and taught by Sullivan '561, or the cited art, to provide a golf ball that exhibits an initial velocity off a clubhead of greater than 240 feet-per-second, when struck by the clubhead of a driver at a velocity of about 160 feet-per-second, or that exhibits a coefficient

of restitution of greater than about 0.785 at a test velocity of 175 feet-per-second. Sullivan '561, and the cited art, are devoid of any disclosure, teaching or suggestion indicating that the COR, initial velocity, values will necessarily result from the structure of claims 1 and 28, as amended.

Accordingly, Applicants respectfully submit that independent claims 1 and 28, as amended are patentable over Sullivan '561 alone, or in combination with, the cited art for at least the reasons stated above. Additionally, Applicants respectfully submit that claims 2, 10, 13, 18 and 19, which depend from claim 1, and claims 37, 41 and 42, which depend from independent claim 28, are also patentable over Sullivan '561 for at least the same reasons.

Regarding dependent claim 13, Section 2 of the Office Action states that Sullivan '561 discloses a golf ball having a diameter of about 1.68 inches, which is about 1.650 and 1.620 inches. Applicants respectfully disagree. First, Sullivan '561 does not disclose a diameter of about 1.68 inches; rather, Sullivan '561 specifically discloses a diameter of "at least 1.68 inches." This disclosure of Sullivan '561 is consistent with USGA requirements that require a minimum golf ball diameter of 1.68 inches. The golf ball of claim 13 is outside of the USGA requirements and outside of the disclosure and teachings of Sullivan '561. Claim 13 has been amended to specify a golf ball having a diameter within the range of 1.62 and 1.65 inches. Applicants respectfully submit that the diameter range in claim 13 is not equal, or equivalent, to a diameter of about 1.68 inches. Further, in light of the strictly enforced, well-known USGA minimum diameter requirement for golf ball design, a person of ordinary skill in the art would not equate a diameter of 1.68 inches with a diameter within the range of 1.62-to 1.65 inches.

II. REJECTION OF CLAIMS 28-30, 32, 35-37, 39 AND 41-46 UNDER 35 U.S.C. § 102(b) AS BEING ANTICIPATED BY SULLIVAN '806.

Section 3 of the Office Action rejected claims 28-30, 32, 35-37, 39 and 41-46 under 35 U.S.C. § 102(b) as being anticipated by Sullivan '561 (U.S. Pat. No. 5,984,806). Claim 28 is an independent claim. Claims 29, 30, 32, 36, 37, 41 and 42 depend from claim 28. With this Reply, claims 35, 39 and 43-46 are canceled without prejudice. Also, with this

Reply, claims 28, 30, 37, 41 and 42 are amended to more clearly set forth the invention, and are now believed to be patentably distinguishable over the cited prior art.

Sullivan '806 does not disclose, teach or suggest the golf ball of claim 28, as amended. In particular, Sullivan '806 does not disclose, teach or suggest a golf ball including a core formed of a polybutadiene rubber synthesized using a neodymium catalyst, a mantle including a co- or ter- polymer of ethylene and acrylic acid, wherein about 100% of the acid groups are neutralized with metal ions, and a cover layer having a Shore D hardness, measured on the curved surface of the golf ball, of greater than about 70, wherein the golf ball exhibits a coefficient of restitution of greater than about 0.785 at a test velocity of 175 feet-per-second.

In contrast, Sullivan '806 describes a perimeter weighted golf ball with visible weighting. A smaller and lighter core is produced and metal particles, or other heavyweight filler materials, are included in the cover compositions. This results in a molded golf ball exhibiting enhanced perimeter weighting. Preferably, the particles are included in a relatively thick inner cover layer (or mantle) of a solid, three-piece multi-layered golf ball. Patterns of weighting material are incorporated in the ball along the outer periphery of the ball so that the pattern is visible along the ball's exterior. The size and weight of the core is reduced in order to produce an overall golf ball that meets, or is less than, the 1.62 ounce maximum weight limitation specified by the U.S.G.A. Sullivan '806 discloses an inner layer formed of a blend of two or more high acid ionomer resins neutralized to various extends (10-90 percent) by different metal cations. The golf ball of Sullivan '806 has a Shore D hardness of about 65 or less, and more desirably, 60 or less.

Sullivan '806 does not disclose, teach or suggest a golf ball including a core formed of a polybutadiene rubber synthesized using a neodymium catalyst. Rather, Sullivan '806 discloses a largely conventional lightweight core construction.

Sullivan '806 also does not disclose, teach or suggest a golf ball having a mantle including a co- or ter- polymer of ethylene and acrylic acid, wherein about 100% of the acid groups are neutralized with metal ions. Sullivan '806 repeatedly cites different neutralization ranges, but none greater than 90 percent. Sullivan '806 is describing the conventional

neutralization percentages prior to the present invention. Neutralization percentages did not exceed 90 percent because the material became unworkable at values approaching and exceeding 90 percent neutralization. Nothing in Sullivan '806 discloses, teaches or suggests exceeding the conventional 90 percent neutralization limit. Sullivan '806 merely describes the practice at that time as understood by one of ordinary skill in the art.

Sullivan '806 also does not disclose a cover layer having a Shore D hardness of greater than about 70 as required by amended claim 28. In fact, Sullivan '806 specifically teaches away from Shore D hardness values over 65. Col. 9, lines 10-12, and Col. 34, lines 58-60.

Accordingly, Applicants respectfully submit that independent claim 28, as amended is patentable over Sullivan '806 alone, or in combination with, the cited art for at least the reasons stated above. Additionally, Applicants respectfully submit that claims 29, 30, 32, 36, 37, 41 and 42, which depend from claim 28, are also patentable over Sullivan '806 for at least the same reasons.

III. REJECTION OF CLAIMS 6-9, 30 AND 32 UNDER 35 U.S.C. § 103(a) AS BEING UNPATENTABLE OVER SULLIVAN '561 IN VIEW OF SULLIVAN '806.

Section 4 of the Office Action rejected claims 6-9, 30 and 32 under 35 U.S.C. § 103(a) as being unpatentable over Sullivan '561 in view of Sullivan '806. With this Reply, claims 6, 7, and 9 are canceled without prejudice. Claim 8 depends from independent claim 1, as amended, and claims 30 and 32 depend from independent claim 28, as amended. Also, with this Reply, claims 8 and 30 are amended to more clearly set forth the invention, and are now believed to be patentably distinguishable over the cited prior art.

Claims 8 and claims 30 and 32 depend from amended independent claims 1 and 28, respectively. As stated above, Applicants respectfully submit that neither Sullivan '561 nor Sullivan '806, alone or in combination, teach, suggest or disclose the limitations and requirements of claims 1 and 28, as amended. Because claims 8, 30 and 32 depend from

claims 1 and 28, Applicants respectfully submit that claims 8, 30 and 32 are allowable over Sullivan '561 and Sullivan '806 for at least the same reasons as stated above.

**IV. REJECTION OF CLAIMS 11, 12, 14, 16, 17, 33, 34, 38, 40, AND 47-56
UNDER 35 U.S.C. § 103(a) AS BEING UNPATENTABLE OVER SULLIVAN
'561 IN VIEW OF YAMAGISHI.**

Sections 5 and 6 of the Office Action rejected claims 11, 12, 14, 16, 17, 33, 34, 38, 40, and 47-56 under 35 U.S.C. § 103(a) as being unpatentable over Sullivan '561 in view of Yamagishi (U.S. Pat. No. 5,779,563). With this Reply, claims 14, 16, 17, 38, 40 and 47-56 are canceled without prejudice. Claims 11, 12 depend from independent claim 1, as amended, and claims 33 and 34 depend from independent claim 28, as amended. Also, with this Reply, claims 11 and 33 are amended to more clearly set forth the invention, and are now believed to be patentably distinguishable over the cited prior art.

Yamagishi describes a multi-piece solid golf having a solid core and a cover of at least two layers enclosing the core. The solid core is formed of a rubber base and has a specific gravity of at least 1.00. The cover is formed of a thermoplastic resin and the cover outer layer has a greater specific gravity than the core or a cover inner layer.

The Office Action indicates that Yamagishi discloses a golf ball wherein the core, intermediate layer and cover have approximately the same specific gravity. The Office Action cites Yamagishi for the range in the core, intermediate layer and the cover. However, Yamagishi does not specify all three layers as having approximately the same specific gravity. Yamagishi teaches increasing the moment of inertia of the golf ball by moving as much weight to the outer portion of the golf ball as possible. Thus, in column 2, lines 31-34, Yamagishi teaches that the cover outer layer must have a higher specific gravity than the cover inner layer, thereby specifically *teaching away* from the present invention.

Moreover, Yamagishi is devoid of any disclosure, teaching or suggestion of a golf ball having a core, a mantle, and a cover layer with approximately the same specific gravity, such that when the ball is rotated in a solution of salt water of sufficient density to

support the ball, the ball exhibits no single preferred orientation. As stated in the present application, such balance improves the intended flight and roll path of the ball.

Applicants respectfully submit that neither Sullivan '561 nor Yamagishi, alone or in combination, teach, suggest or disclose the limitations and requirements of claims 1 and 28, as amended. Because claims 11 and 12 and claims 33 and 34 depend from claims 1 and 28, respectively, Applicants respectfully submit that claims 11, 12, 33 and 34 are allowable over Sullivan '561 and Yamagishi for at least the same reasons as stated above.

V. CONCLUSION

Applicants respectfully request reconsideration of claims 1, 2, 5, 8, 10-13, 18, 19, 28-30, 32-34, 36, 37, 41, 42 and 57-68 for the reasons stated above. Applicants believe that the present application is now in condition for allowance. Favorable reconsideration under 37 C.F.R. § 1.112 is respectfully requested. The Examiner is invited to telephone the undersigned to discuss any issues in this case in order to advance the prosecution thereof.

Respectfully submitted,

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